

INFORMATION PAPER


DASG-HS
8 December 2004

SUBJECT: Combat Eye Protection, the FY 2005 Rapid Fielding Initiative (RFI), and the Approved Product List (APL)

1. Combat Eye Protection (CEP) is a must for Soldiers during field tactical operations, training, or situations where there is risk of combat. Eye injuries have accounted for 11.5% of the total battle injuries during Operation Iraqi Freedom/Operation Enduring Freedom. The CEP program addresses the need for eye armor by making available commercial-off-the-shelf (COTS) eyewear products that provide ballistic and UVA/UVB eye protection. There are two spectacles and two goggles on the FY 2005 RFI list. These products will be supplied to deploying units by Program Equipment Office Soldier (PEO Soldier). Other COTS eyewear is on the Approved Products List (APL) and units may purchase these items using unit funds.

2. The Oakley M Frame and the UVEX XC are the spectacles on the FY05 Rapid Fielding Initiative (RFI) list.

a. The Oakley M Frame is for Soldiers who do not wear glasses.

Item Name	National Stock Number	Part or Model Number	Description	Estimated Unit Cost
Oakley SI M Frame Kit (This is a CEP item)	4240-01-525-3095	11-105	Frame: black. Lenses: gray and clear ballistic lenses. Storage Case. Micro cleaning bag.	\$ 64.00
Oakley SI M Frame Strike Clear Replacement Lens	4240-01-525-7555	11-112	Clear ballistic replacement lens for the Oakley M Frame.	\$ 20.00
Oakley SI M Frame Strike Gray Replacement Lens	4240-01-525-7554	11-113	Gray ballistic replacement lens for the Oakley M Frame.	\$ 20.00
Oakley SI M Frame Replacement Storage Case	4240-01-525-7561	11-114	Replacement storage case for the Oakley M Frame.	\$ 20.00
Oakley SI M Frame Ballistic Micro Cleaning Bags	4240-01-525-3109	11-115	SI Ballistic Micro Cleaning Bags (5 pack).	\$ 15.00
<p>The Modified Oakley M Frame is on the FY 2005 RFI list. The Oakley SI M Frame military design meets ANSI Z87.1-2003 optical and safety tests, provides ballistic-fragment protection, and weighs just over one ounce. The lens material blocks 100% of all UVA, UVB, and UVC light. This eyewear is for Soldiers who do not require prescription lenses.</p> 				

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b. The UVEX XC has an optical insert, and is the RFI spectacle for Soldiers who require glasses.

Item	National Stock Number (NSN)	Manufacturer Part Number	Description	Estimated Unit Price
Uvex XC Spectacle Kit (This item is an authorized product, and it is a CEP item; This product was found to be technically acceptable under the CEP program, however production quantities were not awarded for this item under the CEP contract. Production quantities are currently being provided under the RFI effort.)	4240-01-516-5361	S99-S3399-MIL	Spectacle, combo pack contains clear spectacle assembly with clear ballistic lens, replacement sunglass gray ballistic lens, and carrying case.	\$ 12.24
UVEX XC Spectacle Clear Assembly	4240-01-516-3460	S99-SS3300X-ML	Includes frame and clear ballistic lens.	\$ 5.28
UVEX XC Spectacle Gray Assembly	4240-01-516-3452	S99-SS3301X-ML	Includes frame and gray sunglass ballistic lens.	\$ 5.74
UVEX XC Spectacle Clear Replacement Lens	4240-01-516-3469	S6950X	Pack of 10 UVEX XC Spectacle Clear Replacement Lenses.	\$ 25.52
UVEX XC Spectacle Gray Sunglass Replacement Lens	4240-01-516-3473	S6951X	Pack of 10 UVEX XC Spectacle Gray Sunglass Replacement Lenses.	\$ 30.16
UVEX XC Spectacle Replacement Carrying Case	4240-01-516-3444	S99-S491-MIL	UVEX XC Spectacle black replacement carrying case.	\$ 3.42
UVEX XC Spectacle Prescription Lens Carrier	4240-01-516-5342	S3350	Prescription lens carrier used with UVEX XC spectacles.	\$ 11.48

The UVEX XC is on the FY 2005 RFI list. The UVEX XC protective eyewear consists of a lightweight rigid thermoplastic frame combined with a soft elastomer material on the temple that provides comfort at contact points with the face. The frame features ratchet lens adjustment to complete the fitting system and provides extended wear comfort. The frame and lens assembly weighs 1.3 ounces. The UVEX XC uses an interchangeable dual 9-Base Wrap-Around polycarbonate lens, which protects the entire eye socket area with exceptional peripheral coverage and unobstructed vision. Additionally, a small ventilation space has been engineered between the frame and the lens that vents the eye socket area to help reduce moisture. All lenses have been treated with anti-fog coating to further reduce the level of moisture and control fogging. The lens has a nominal thickness that provides ballistic-fragment protection, and meets US military eyewear ballistic impact requirements and all ANSI Z87.1-2003 safety requirements. The UVEX XC kit includes the frame, clear and gray (sunglasses) ballistic lenses, and carrying case. **This is the only RFI product that currently has an insert for prescription lenses. The OFE will be able to support the inserts for the UVEX XC and TOE Optometry units will be able to support replacements in Theater.**



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3. The ESS Land Ops Goggle and NVG Low Profile Goggle are the goggles on the FY05 RFI list.

a. The ESS Land Ops Goggle is designed to fit over Soldiers' glasses.

Item	National Stock Number (NSN)	Manufacturer Part Number	Description	Estimated Unit Price
ESS Land Ops Goggle Kit (This item is authorized product, and it is a CEP item; This product was found to be technically acceptable under the CEP program, however production quantities were not awarded for this item under the CEP contract. Production quantities are currently being provided under the RFI effort.)	Pending Assignment	ESS-01-OV-ML-SC	Frame: olive green neoprene rubber, black elastic web strap Ballistic Lenses: 2.4mm thick polycarbonate lens (clear and sunglass). Carrying Pouch. Anti-Reflective Sleeve.	\$ 33.64
ESS Land Operations Goggle Kit (with anti-reflective sleeve, no Carrying Pouch)	4240-01-504-0052	ESS 01OV-ML-S	Frame: olive green neoprene rubber, black elastic web strap Ballistic Lenses: 2.4mm thick polycarbonate lens (clear and sunglass). Anti-Reflective Sleeve.	\$33.41
ESS Land Ops Replacement Lenses	4210-01-492-5722	EL1-50	Pack of 50 Ballistic replacement lens Clear Lens	\$ 299.71
	4210-01-492-5725	EL2-50	Pack of 50 Ballistic replacement lens Tinted Gray Lens	\$ 299.46

The ESS Land Operations Goggle is on the FY 2005 RFI list. Both prescription lens wearers and individuals who do not require prescription lenses can wear the ESS Land Operations Goggles. A variation of these goggles, without the anti-reflective sleeve, is also available. The ESS Land Operations Goggles may be requisitioned through normal supply channels. The ESS Land Operations Goggles have an injection molded rubber frame with polyurethane foam backing with a foam skin that contacts the face. The rubber frame holds the lens while the foam interface provides a seal between the face and goggle frame. Foam covered vent holes allow some ventilation while keeping dust out. The clear and sunglass lenses are a single piece, simple curve, injection molded, high impact polycarbonate design with anti-scratch and anti-fog coatings. The ESS Land Operations Goggles provide ballistic-fragment and UVA/UVB protection. The lens has a nominal thickness of 2.4 mm and meets US military MIL V-43511C ballistic impact requirements. The ESS Vehicle Ops Goggles also meets ANSI Z87.1-2003 optical and safety requirements. The anti-reflective sleeve reduces glint when the goggle is not in use. The ESS Land Operations Goggle's weight of 4.1 ounces is comparable to the SWDG. The ESS Land Operations Goggles are also available without the anti-reflective sleeve.



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- b. The ESS NVG Low Profile Goggle fits closer to the face, designed for Soldiers who do not wear glasses.

Item	National Stock Number (NSN)	Manufacturer Part Number	Description	Estimated Unit Price
ESS Profile Night Vision Goggle (NVG) Kit (This item is authorized product, and it is a CEP item; This product was found to be technically acceptable under the CEP program, however production quantities were not awarded for this item under the CEP contract. Production quantities are currently being provided under the RFI effort.	4240-01-504-6222	EP01BK1-TSB	Frame: Neoprene rubber (black), black elastic web strap Ballistic Lenses: 2.8mm thick polycarbonate lens (clear and sunglass). Carrying Pouch Anti-Reflective Sleeve Goggle Frame: Black	\$ 50.30
	4240-01-504-5706	EP01OD1-MSB	Frame: Neoprene rubber (green), black elastic web strap Ballistic Lenses: 2.8mm thick polycarbonate lens (clear and sunglass). Carrying Pouch Anti-Reflective Sleeve Goggle Frame: Green	\$ 50.30
	4240-01-504-5727	EP01DT1-MSB	Frame: Neoprene rubber (tan), black elastic web strap Ballistic Lenses: 2.8mm thick polycarbonate lens (clear and sunglass). Carrying Pouch Anti-Reflective Sleeve Goggle Frame: Tan	\$ 50.30
ESS Profile NVG Replacement Lenses	4240-01-504-5641	PR1C-50	Pack of 50 Ballistic replacement lens Clear Lens	\$ 439.85
	4240-01-504-6143	PR1Y-50	Pack of 50 Ballistic replacement lens Smoke Gray Lens	\$ 439.85

The ESS Profile NVG Goggles is on the FY 2005 RFI list. The ESS Profile NVG Goggles provide ballistic and UVA/UVB protection. Users who do not require prescription lenses may wear the ESS Profile NVG Goggles. These goggles may be requisitioned through normal supply channels. The ESS Profile NVG Goggles have an injection molded rubber frame with rubber goggle seal that contacts the face. The rubber frame holds the lens. Foam covered vent holes allow ventilation while keeping dust out. The clear and sunglass lenses are a single piece, simple curve, injection molded, high impact polycarbonate design with anti-scratch and anti-fog coatings. The lens has a nominal thickness of 2.8 mm, provides ballistic-fragment protection, and meets all ANSI Z87.1 requirements and the rigorous MIL-V-43511C .22 caliber ballistic impact test. Clear and sunglass lenses offer 100% UVA/UVB protection and distortion-free optics. The anti-reflective sleeve reduces glint when the goggle is not in use. The ESS Low Profile NVG Goggle's weight of 4.1 ounces is comparable to the Sun Wind and Dust Goggle.



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4. The ESS ICE 2, the Wiley-X SG 1, and the Pyramex Venture II are not on the FY 05 RFI list but are on the Approved Product List (APL). They may be purchased for Soldiers using unit funds.

a. The ESS ICE 2, is the only other CEP spectacle besides the UVEX XC that has an optical insert.

Item Name	National Stock Number	Part or Model Number	Description	Estimated Unit Cost
Eye Safety Systems Interchangeable Component Eyeshield (ICE) 2 (This item is authorized, but it is NOT a CEP item.)	4240-01-525-5085	ESSICE-2	Frame: includes adjustable temples that can be made longer or shorter, and have malleable ear bends that custom fit to any user; also includes an anatomical nose pad. Ballistic Lenses: set of two 2.4mm high-impact polycarbonate lenses, clear and smoke gray. Smoke gray lens is installed in frame. Carrying Pouch: with divided lens pockets, a belt loop and a clip attachment Fog Repellent Cloth Snap-on Neck Leash	\$ 24.00
ESS ICE2 Clear Replacement Lens	4240-01-525-5107	ESSICEL1-50	Pack of 50 Ballistic clear replacement lenses for the ESS ICE2.	\$ 225.00
ESS ICE2 Smoke Gray Replacement Lens	4240-01-525-5098	ESSICEL2-50	Pack of 50 Ballistic smoke gray replacement lenses for the ESS ICE2.	\$ 225.00
ESS ICE2 Replacement Frame	4240-01-525-5095	ESSICEKIT	Replacement frame for the ESS ICE2. Includes temples and nosepiece.	\$ 6.50
ESS ICE2 Replacement Carrying Pouch	4240-01-518-9838	1ESSICECS	Replacement carrying pouch for the ESS ICE2.	\$ 6.84
ESS ICE2 Replacement Fog Repellent Cloth	4240-01-525-5107	ESSFOG24	Pack of 24 replacement fog repellent cloths for the ESS ICE2.	\$ 32.50
ESS ICE2 Replacement Snap-on Neck Leash	4240-01-525-4777	ESSLSH-24	Pack of 24 replacement snap-on neck leash for the ESS ICE2.	\$ 43.20
ESS ICE 2 Spectacle Prescription Lens Carrier	4240-01-525-4784	EPPRSC-P	Prescription lens carrier used with ESS ICE 2 spectacles and NVG Goggle.	\$ 15.50

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Item Name	National Stock Number	Part or Model Number	Description	Estimated Unit Cost
The ESS ICE 2 is not on the RFI list, but the ESS ICE 2 has been approved for use by Soldiers. In the near future, the ICE 2 is expected to have an optical insert in production for Soldiers who require corrective lenses. The ESS ICE 2 Spectacle meets ANSI Z87.1-2003 optical and safety tests, provides ballistic-fragment protection, and weighs 1.2 ounces. It may be a good alternative to the UVEX XC when the insert is fully available.				

b. The Wiley-X SG 1 is designed for Soldiers who do not wear prescription glasses.

Item	National Stock Number (NSN)	Manufacturer Part Number	Description	Estimated Unit Price
Wiley X SG-1 (This item is authorized, but it is NOT a CEP item)	4240-01-504-0994	SG-1	Frame is black plastic with foam rubber, includes temple arms and black elastic headband. Ballistic Lenses: set of two 2.1 mm polycarbonate lenses (clear and sunglass). Black Storage Case included.	\$ 62.82
Wiley X SG-1 Clear Replacement Lens	4240-01-504-5326	SG-1C	Ballistic clear replacement lens for the Wiley-X SG-1.	\$ 19.63
Wiley X SG-1 Smoke Green Replacement Lens	4240-01-504-5312	SG-1G	Ballistic smoke green replacement lens for the Wiley-X SG-1.	\$ 19.59
Wiley X SG-1 Replacement Elastic Strap	4240-01-504-5754	SG-1E	Replacement elastic strap for the Wiley-X SG-1.	\$ 6.53
Wiley X SG-1 Replacement Frame	4240-01-504-6524	SG-1F	Replacement frame for the Wiley-X SG-1 includes temples and elastic strap.	\$ 32.66

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The Wiley-X SG-1 is not on the RFI list. The Wiley-X SG-1 spectacles are commercially available protective eyewear that provides ballistic and UVA/UVB protection. Users who do not require prescription lenses may wear the Wiley-X SG-1. The Wiley-X SG-1 is a dual lens eyewear that uses a foam seal around each eye socket to limit infiltration of wind and dust. The system provides two functions in one: converting from a spectacle with temple arms to a low profile spectacle with a strap. The temples disengage with a push of a button and can be replaced with the snap loaded elastic headband. The lenses provide ballistic fragment protection (clear and sunglass). "Ultra-foam" seals the eye orbits. The SG-1 spectacle weighs 1.3 ounces.



Though the Wiley-X SG-1 is included as an authorized item, it is not suitable for Soldiers who require prescription lenses because of the cost and the potential for decreased ballistic performance when the prescription lenses are in place. Some units are having commercial companies fabricate prescriptions for the Wiley-X at a cost of \$100 each for clear and sun lenses. Wiley-X maintains that Rx limits for their product is +/- 3.00 D Sphere and +/- 2.00 D Cylinder. Natick Laboratories has tested the Wiley-X with higher prescriptions inserted and it has failed ballistic tests. Prescription lenses beyond the parameters recommended by Wiley-X should not be ordered by units or issued to Soldiers. In addition, Wiley-X has not completed the necessary certification for ANSI compliance on their advertised range of prescription lenses. Army optical laboratories will not be able to support prescription lenses for the Wiley-X and will not be able to support any replacements in Theater. Soldiers who require ballistic-protective spectacles should wear the UVEX XC (also an Army authorized item) with its prescription lens carrier. The Naval Ophthalmic Support and Training Activity can support the inserts for the UVEX XC and Table of Equipment Optometry units will be able to support replacements in Theater.

c. The Pyramex Venture II is designed for Soldiers who do not wear prescription glasses.

Item	National Stock Number (NSN)	Manufacturer Part Number	Description	Estimated Unit Price
Pyramex Venture II Clear Spectacles (This item is authorized, but it is NOT a CEP item)	4240-01-500-6174	SB1810S	Frame: black, clear lens, fully adjustable temples with 4 size settings. Lens: Ballistic clear.	\$ 37.63 (Package of 12 spectacles)
Pyramex Venture II Gray Spectacles (This item is authorized, but it is NOT a CEP item)	4240-01-500-6173	SB1820S	Frame: black, gray lens, fully adjustable temples with 4 size settings. Lens: Ballistic gray.	\$ 36.19 (Package of 12 spectacles)

The Pyramex Venture II is not on the RFI list. The Pyramex Venture II is available with clear or gray (sunglass) lens. Each lens is mounted in a separate black frame. The Pyramex Venture II has fully adjustable temples with 4 size settings. The Pyramex Venture II meets ANSI Z87.1-2003 safety requirements. The Pyramex Venture II does not have an optical insert and is not suitable for Soldiers who require a spectacle prescription.



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5. The ESS Vehicle Ops goggle is not on the RFI list but is on the Approved Product List (APL). It is designed to fit over Soldiers' glasses. This product may be purchased for Soldiers using unit funds.

Item Name	National Stock Number	Part or Model Number	Description	Estimated Unit Cost
Eye Safety Systems (ESS) Vehicle Ops Goggles (This is a CEP item)	Pending Assignment	ESS01BK-MCSC	Frame: tactical black with adjustable strap system. Ballistic Lenses: (clear and tinted gray). Anti-reflective sleeve. Carrying Pouch.	\$ 34.07
ESS Vehicle Ops Replacement Lens (Clear Lens)	4210-01-492-5722	EL1-50	Pack of 50 Ballistic Clear Replacement Lenses	\$ 299.71
ESS Vehicle Ops Replacement Lens (Tinted Gray)	4210-01-492-5725	EL2-50	Pack of 50 Ballistic Tinted Gray Replacement Lenses	\$ 299.46

This goggle is not on the RFI list. The ESS Vehicle Ops Goggle is designed for Soldiers exposed to harsh environments while operating vehicles, and both prescription lens wearers and individuals who do not require prescription lenses can wear the ESS Vehicle Operations Goggles. The high-density, restricted perimeter filtration provides a barrier against airborne debris while traveling at high speeds. The ESS Vehicle Ops goggle has a fully ventilated frame with buffered airflow for fog resistance and high filtration of airborne particles. The face padding is skinned to provide durability and easy clean-up. The ESS Vehicle Ops Goggles meets ANSI Z87.1-2003 optical and safety tests, provides ballistic-fragment protection, and weighs approximately 5 ounces, slightly more than the standard Sun, Wind, and Dust Goggle.



6. POC for this information is the undersigned or MAJ Dean Bancroft at CHPPM, (410) 436-1005, DSN 584-1005, email: dean.bancroft@apg.amedd.army.mil.

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